

Sample size requirements for testing

Material Size Requirements

TEST TYPE	SHEET *	PLATE *	ANGLE	BAR	PIPE	TUBING	POWDER
Chemical **	2" x 2"	2" x 2"	2" long	2" long	2" long	2" long	20 g.
Tensile up to 120K	2" W x 12" L	Note 1	18" long	6" long/Note 2	Note 3	12" long	-----
Tensile >120K to 400K	-----	2 1/8" wide x 18"	18" long	Rebar 24"	2 5/8" OD x 20"	2 5/8" OD x 20"	-----
Flattening	-----	-----	-----	-----	3" seamless 4" welded	3" seamless 4" welded	-----
Bend	Note 4	Note 4	-----	Note 4	Note 4	Note 4	-----
Expansion	-----	-----	-----	-----	4" long	4" long	-----
Charpy	-----	Note 5	7" long	9" long	3" long	-----	-----
Hardness	2" x 2"	2" x 2"	2" x 2"	2" long	2" long	2" long	-----
Flare	-----	-----	-----	-----	4" long	4" long	-----
Micro & Macro	2" x 2"	2" x 2"	2" x 2"	2" long	2" long	2" long	-----
Recast Check	2" x 2"	2" x 2"	2" x 2"	2" long	2" long	2" long	-----
Stress Rupture	2" W x 12" L	2" W x 12" L	2" W x 12" L	6" long	-----	21" long	-----
Sieve	-----	-----	-----	-----	-----	-----	200 g.
Grain	2" x 2"	2" x 2"	2" x 2"	2" long	2" long	2" long	-----
Hydro - Max Pressure	-----	-----	-----	-----	10,000 PSIG	10,000 PSIG	-----

- NOTES:**
- (1) Plate up to 3/4" thick requires 3" W x 18" L; Plate greater than 3/4" thick requires 2" W x 6" L.
 - (2) Bar or wire under 1/4" diameter requires 18" long.
 - (3) Pipe up to 3/4" wall thickness requires 15" long; Pipe greater than 3/4" wall thickness requires 6" long.
 - (4) Requirement depends on size and specification; *Call LTI for the sample size and testing direction.*
 - (5) 4" W x 6" L with longitudinal direction noted.

* Grain direction is very important when submitting sheet or plate for testing. Always mark grain direction with an arrow.

** 5g sample weight is needed for chips and samples too small to perform Atomic Emissions Spectroscopy (AES).